Academic Journal of Management and Social Sciences
ISSN: 2958-4396 | Vol. 13, No. 2, 2025

Building an Enterprise Financial Intelligence Analysis Platform and Its Impact on Decision Support

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Abstract: With the tide of digital economy rolling over the world, corporate operation mode is being greatly transformed. On the one hand, with the application of the technologies such as Internet of Things and cloud computing, a large amount of data from multi-source and heterogeneous appear in the course of daily business. Data is "island" existing in enterprise ERP system, business system and third-party platform. On the other hand, the speed of change of market environment makes the traditional manual analysis method and experience decision-making mode can't meet the requirement of real-time and precision management. Financial Intelligence Analytics Platform realizes innovation in platform architecture and upgrade in function by applying big data, artificial intelligence and other technologies. Its construction logic includes four aspects: data architecture, algorithm import, process adaptation and interface design. It also transforms decision support model in different level. To solve the problem of implementation, it is necessary to create data fusion, cross-department cooperation and intelligent early warning mechanism. Research shows that the core value of Financial Intelligence Analytics Platform is to promote finance from transactional accounting to value creating decision support, and use financial means to provide powerful support for the digital transformation of enterprise.

Keywords: Financial Intelligence Analysis; Platform Construction; Decision Support; Data Integration; Business-Finance Synergy.

1. Introduction

Business environment today is more uncertain, competition is fiercer and regulation is stricter, which require financial management to respond faster and provide better decision support. Traditional financial management focuses on post-event accounting, and collation and report of finance data are completed manually. Its shortcoming is long period of time and narrow range of dimension. It is hard to meet the requirement of real-time operation information and early warning of risk for real-time control by management[1-2]. As the deep integration of big data and artificial intelligence into the enterprise management, intelligent financial analytics platform is the key solution to solve this problem. By consolidating the data from multi-source and intelligent algorithms, the financial analysis extends from "post-event summary" to "pre-event prediction" and "real-time control", and then the relationship between finance, operation and decision is reshaped. Based on the corporate financial transformation practices, this paper discusses the construction logic of intelligent financial analytics platform in detail, analyzes the specific impact of intelligent financial analytics platform on decision support, and puts forward the implementation strategies, so as to provide action basis for the enterprise to improve the value of financial decision-making and promote the digital transformation of enterprise by technology.

2. Construction Logic of Enterprise Financial Intelligence Analysis Platform

2.1. Data-driven Architecture Design

In the process of digital transformation, most enterprises will encounter problems like dispersed business and finance systems and even data inconsistency. A data-driven architecture design should break out the limitation of traditional financial data warehouse. As shown in Fig. 2, a multi-level architecture including infrastructure layer, data layer and analytics layer should be established. The infrastructure layer uses hybrid cloud deployment model to meet data storage requirements of both security and scalability. The data layer uses operation of data lakes and data warehouses to unify collection and cleansing of transactional, operation and external data. The analytics layer uses standardized data interface to guarantee data flow between different modules. This architecture design uses unified data standards and governance rules to establish high-quality data foundation for subsequent intelligent analysis. Meanwhile, it solves the pain points of coarse granularity and poor timeliness of financial data.

2.2. Integration of Intelligent Algorithm and Model

The extensive application of intelligent algorithms is the key to create value of the platform. Enterprises' requirement for financial analysis evolves from presentation of historical data to predictive and diagnostic analysis. The integration of intelligent algorithms and models should serve financial business and establish a complete set of intelligent algorithms from accounting to analysis, forecast and risk control. The platform needs to embed time-series and machine learning algorithms to complete revenue and cash flow trend prediction. It also needs to embed tax and financial risk identification models to detect anomalies in transaction rules through rule engines and data mining technology[3-4]. By embedding multidimensional analytical models, the platform can decompose metrics by dimensions like institution, product and region. The integration of algorithms and models is not simply a matter of stacking. It should deeply connect with the business characteristics of enterprises and improve the reliability and practical value of analytical results through

continuous training and optimization of models to make analytical results more accurate and provide precise data support for decision-making.

2.3. Adaptation and Optimization of Business Process

The degree of business and financial process integration affects the effectiveness of platform implementation. Most enterprises encounter problems like dispersed business and finance workflows and challenges in data traceability. Effective adaptation of business processes should use finance-business integration thinking to restructure and reengineer existing financial processes. The platform uses financial accounting nodes to embed in whole lifecycle of business transaction, making automated generation from business documents to accounting vouchers possible; Uses activity-based cost allocation models to make accurate tracing of cost driver possible through data correlation; Designs dynamic budget adjustment workflows to enable real-time comparison between budgeted and actual operational data. Process optimization should fully consider cross-departmental operational requirements. It should remove bottlenecks and redundant steps to avoid unnecessary circulation and make financial analysis results reflect business facts. In this way, the platform plays the role of a bridge connecting business and finance instead of an isolated information system.

2.4. Human-Computer Interface Design

Considering the current demands of society, finance professionals and management expect analytical tools to be more intuitive. Therefore, the interface design should be technically rigorous but user-friendly. It should use layered architecture to meet the needs of different users. On one hand, the interface should enable multi-device access based on PC and mobile platforms; On the other hand, the design of interactive BI dashboards should enable users to customize the dimensions of metrics and the format of presentations through drag-and-drop. In addition, natural language queries should be used to reduce the operationality of non-professional users. Because the interface design focuses on user experience, it should present analytical results through intuitive data visualization while ensuring deep-dive analytical results to explore data granularly. That is, users can trace aggregated data back to basic data through the interface design. This approach ensures analytical convenience while meeting analytical depth requirements and applying analytical results.

3. Influence of Intelligent Financial Analytics Platforms on Decision Support of Two Dimensions

3.1. Optimization of Precision of Decision

The changing market environment requires higher timeliness of decision-making. Traditional financial analysis is based on manual accounting and report preparation. Decision response is delayed because of the low efficiency of financial analysis. Intelligent financial analytics platforms realize fundamental optimization of decision efficiency through automated data processing and real-time analysis (Figure 2). As a wholly-owned subsidiary of a Fortune Global 500 company, C&D Real Estate Group achieved high-level automated integration of business and finance after implementing our intelligent financial platform. Over 100 intelligent application scenarios were implemented, and the results of personnel configuration optimization were evident and clear (Figure 1). It achieved its "1235 Intelligent Efficient Financial Reporting" target[5]. The cycle of generating reports became significantly shorter after implementation. Based on the implementation of our intelligent financial platform, the group realized intelligent and efficient personnel configuration. By leveraging over 100 intelligent review rules implemented in its contract middle platform, it finds fulfillment risks. Our intelligent financial platform automatically captures, cleanses, and calculates data and no longer relies on manual generation of reports. Management receives real-time access to key indicators. When the alert function is triggered, the anomaly is immediately alerted. This enables the decision-maker to quickly identify risks and opportunities and makes the enterprise respond more nimbly in competition and win the market.

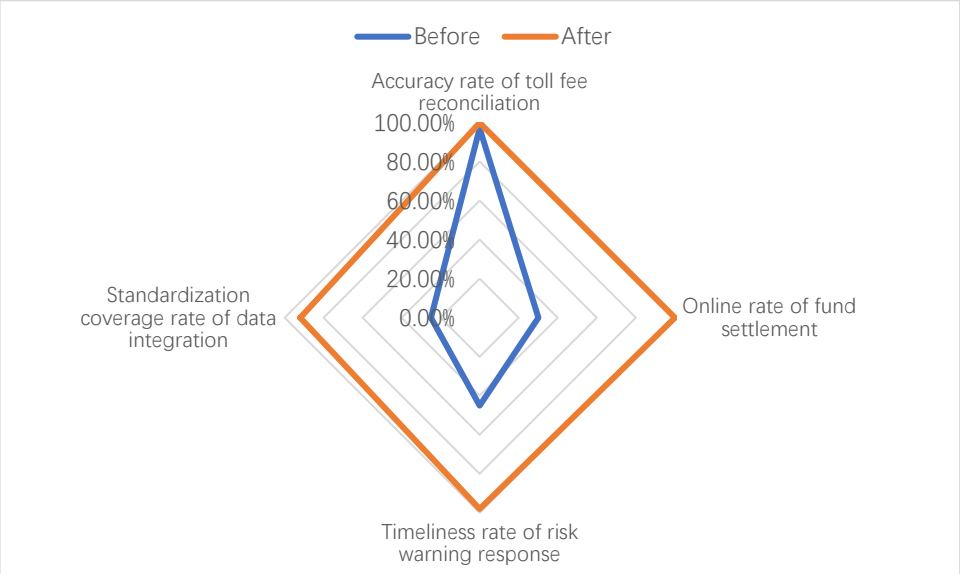

Figure 1. Proportion of Financial Personnel Structure

3.2. Optimization of Precision of Decision

Limited data processing capabilities of traditional financial analysis prevent us from achieving comprehensive multi-factor analysis and precise forecasting. As a result, large decision-making blind spots are left in the traditional financial analysis process.

The Financial Intelligence Analytics Platform improves the accuracy of decision-making as a whole, and establish a data governance and intelligent modeling dual-engine system for the platform: Unified data standards and data quality monitoring for each stage of data management ensure that the data used for decision-making are true from the source, and therefore avoid making incorrect decisions due to inaccurate data. Intelligent forecasting models analyze internal and external data to identify key drivers of financial metrics, and provide very reliable predictions that offer quantifiable evidence for corporate strategic planning. Identification models of potential risks based on intelligent analysis rapidly identify anomalies in transactions in real time and locate latent risk points. They provide clear objectives for risk management decisions[6-7].

3.3. Extending Dimensions of Decisions

With the digital revolution underway, enterprises should transcend their limited thinking in making decisions. The financial intelligence analytics platform injects vitality into corporate decision-making with data integration and innovative analysis. Relying on powerful data fusion and multidimensional analytical capabilities, the financial intelligence analytics platform regenerates the enterprise decision-making structure. Based on data integration, it provides a way for financial data and operating data to communicate, and deeply aggregate some key metrics of business—such as sales, production, and the supply chain—with financial data to form a multidimensional data network. It also helps enterprises to draw on external information such as the industry and policy, and make full use of external information to better understand market trends and policy orientation. By applying layered intelligent analysis capabilities, it provides accurate and customized data support for decision-making at different levels—from group strategic planning and business unit operation optimization to subsidiary business adjustment. This comprehensive and layered data support for decision-making enables enterprises to transcend a narrow mindset and adopt a more macro and integrated mindset in handling business. This way, the enterprise significantly improves the scientific level and accuracy of decisions.

3.4. Improvement in Quality of Decisions

Based on multidimensional data integration and intelligent algorithms, the enterprise financial analytics platform proceeds from strategy decomposition. That is, decomposing the long-term corporate goal into financialable items, adopting dynamic data modeling to realize “strategic goal-activity” mapping in real time, and enabling managers to intuitively understand the marginal contribution of their decisions to the strategic goal. Take Haier Smart Home, a well-known home appliance manufacturer, as an example. Its intelligent financial system decomposes the “global operations” strategic goal into a multidimensional accounting metric system, and turns 8,935 accounting subjects into less than 120. And accounting is supported by dynamic modeling in 10 dimensions such as aging analysis [8-9].

Data from Haier Smart Home’s Publicly Available Report on Application of Financial Intelligence Analysis Platform. Driven by a cost-benefit analysis engine, the platform provides real-time data from the entire group. The reporting consolidation cycle changed from days of manual reporting to real-time system reporting, and accounting accuracy improved 40% compared with manual accounting. At the resource allocation level, the platform does not rely on basic accounting through process reengineering, enabling financial personnel to play a guiding role in analytical work. The proportion of basic accounting personnel decreased by 60%, saving more than 200 million yuan in labor costs, which is calculated based on an accounting staff cost of 10,000 yuan per person per month. The specific results of the intelligent optimization achieved by this transformation are shown in Figure 2. Closed-loop analysis mechanism from strategy to execution turns financial analysis from being a data-driven, value-reflecting analyzer into a value-creating driver, enabling the enterprise to sustain value growth in an uncertain environment.

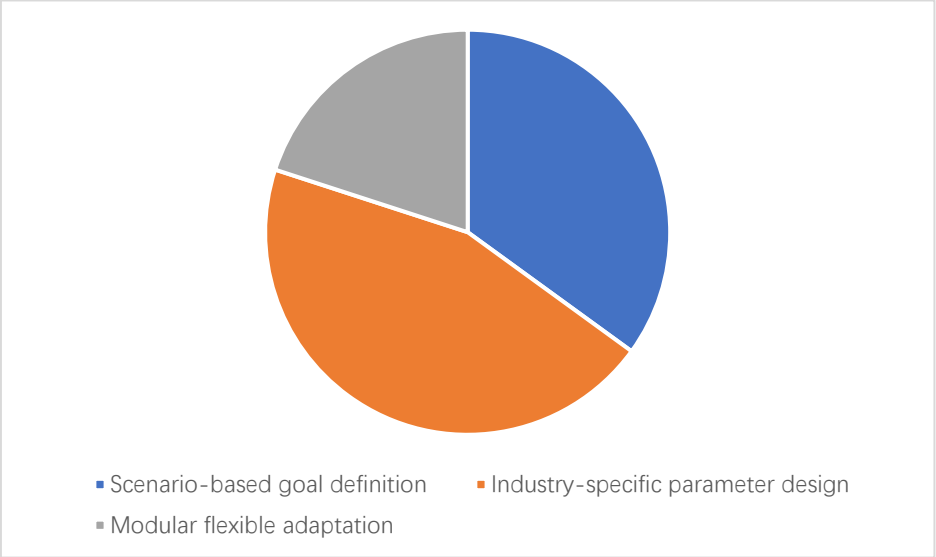

Figure 2. Comparison of Key Financial Indicators Before and After Intelligent Transformation of the Financial Analysis Platform of Haier Smart Home

4. Application Response Strategies for Financial Intelligence Analysis Platform

4.1. Construct Multi-Source Data Integration Architecture

In the digital age, data is becoming a key corporate asset. The value release of financial intelligence analytics platforms greatly depends on the breadth and quality of data support. The more comprehensive and accurate the data, the more deeply the platform could discover the underlying business logic and financial relationships and provide more reliable evidence support for corporate decision-making. First, enterprises should establish standards for data management at the source. It is necessary to clarify the scope and standards of multi-source data collection from internal business systems, financial systems and industry databases. At the same time, it is also necessary to clarify who is responsible for which part to avoid the chaos of data management. On this basis, it is necessary to build a data middle platform as the main body for data integration. The platform should implement centralized storage, data cleansing and governance. Intelligent recognition algorithms can be used to solve the problem of incompatible data formats in different systems and achieve efficient data fusion. It is very important to build a data quality monitoring mechanism. It is necessary to implement real-time monitoring of data integrity, accuracy and consistency, automatically identify anomalies and ensure timely handling to comprehensively ensure data quality.

4.2. Building Collaborative Mechanisms Across Departments

The financial intelligence analysis platform is not a “solo” performance of the finance department. The implementation and effective operation of the financial intelligence analysis platform must be coordinated with finance, business, IT and other departments to achieve the best performance[10]. From the perspective of efficient operation of the enterprise, the collaboration across the whole business is the allocation of corporate resources and improving corporate operation efficiency. It is also the basic prerequisite for promoting the financial intelligence platform into business management. To meet this practical need, companies should build a project team consisting of personnel from the finance department, IT department and business unit. They guarantee that the data source is involved in the early stage of requirements collection and ensure that the architectural design and functional development of the platform accurately reflect the workflow of the operational processes of each department. Establish a long-term and effective communication mechanism. It is necessary to use regular meetings, shared documents and other methods to feedback the development process of the platform in a timely manner and solve problems occurring in the construction process in an efficient way. It is also necessary to continuously collect feedback on the effectiveness of platform use from all departments and use the feedback to continuously improve and iterate the platform. Clarify the responsibilities of data management in different departments: The business unit ensures the accuracy and timeliness of the source data; Finance is responsible for deep data analysis and practical application; IT is responsible for technical support and system maintenance. This will promote the high-quality development of the company.

4.3. Establish Intelligent Early Warning System

Now, financial risk monitoring mostly depends on manual inspection which will waste lots of human and time resources and easy to miss the risk points and delay the time to response the risk point. Build an intelligent early warning system is a reasonable solution to solve above problems. Firstly, the integrated application of enterprise business and regulatory requirements of industry can map the scientific and comprehensive risk indicator, which will provide accurate monitoring according to the evidence of early warning system. Secondly, early warning alert model should be embedded into financial analytic platform and set the reasonable threshold and anomaly rules for each indicator, so that the dynamic monitoring of risk metric can be achieved. Real-time early warning on the possible risk metric will be achieved. The early warning level should be tiered and the corresponding response workflow should be triggered according to the level of risk. It must be clearly defined that who will receive the early warning alert and the corresponding response time. Avoid the possible risks aggregation due to the delayed response. What is more, it should achieve deep integration between the early warning system and business. When the possible risk is discovered, the early warning should be pushed to the responsible person automatically and the corresponding corrective action should be provided, so that the early warning and response can be achieved.

5. Conclusion

The construction of financial intelligence analytic platform is the core link of financial digitalization of enterprise. The enterprise financial digitalization logic is realized by the financial intelligence analytic platform systematic logic which includes data intelligent architecture, integrated intelligent algorithm, process adaptation optimization and human-computer interface. Platform can achieve intelligent upgrade in financial management by above logic. The impact of intelligent financial analytic platform on decision support can be summarized as follow four dimension: efficiency innovation, precision optimization, dimensional expansion and quality enhancement, which will support decision from experience to data. To solve the challenge of data, collaboration and risk in implementation, the enterprise should establish the framework of multi-source data integration, build cross-department collaboration mechanism and apply intelligent early-warning system. With the continuous development of technology, the Financial Intelligence Analytics Platform will tend to be integrated more deeply into business-finance and more accurate prediction. The Financial Intelligence Analytics Platform will become a key link to achieve enterprise strategic objective and core competitiveness.

References

[1] Zong S, Yang F, Long L, et al. (2025). Promote or Inhibit? The Double-Edged Sword Effect of Adopting Generative Artificial Intelligence on Creativity. Advances in Psychological Science, 33(06): 905–915.

[2] Wang H, Ding S. (2025). Research Progress on the Economic Impact of Generative Artificial Intelligence. Economic Dynamics, 2025: 1–18.

[3] Tang L, Xu Y. (2025). Research on the Efficient Development Path of China's Generative Artificial Intelligence Industry: Configuration Analysis Based on TOE Framework. Scientific Research, 2025: 1–13.

[4] Feng Q. (2025). New Paradigm of Management Accounting Research Driven by Artificial Intelligence. Finance and Accounting Monthly, 46(11): 31–40.

[5] Zhao J, Dou Z, Yang H, et al. (2025). The Impact of Artificial Intelligence Technologies Represented by DeepSeek on Discipline Development: Tool Innovation and Method Integration. Journal of Beihang University (Social Sciences Edition), 38(03): 36–51.

[6] Jiang H, Zeng W. (2025). Generative Artificial Intelligence Drives the Transformation of Educational Evaluation. Chinese Journal of Education, 2025(08): 41–48.

[7] Liang L, Song M. (2025). Exploration of Agile Audit Mode Transformation and Practice Framework Driven by Digital Intelligence Technology. Finance and Accounting Monthly, 46(15): 91–96.

[8] Wang W, Deng Y. (2025). The Symbiotic Logic and Practical Path of Human–Machine Composite Educators. Journal of Central China Normal University (Humanities and Social Sciences Edition), 64(04): 90–99.

[9] Xue L, Jiang L. (2025). Generative AI Drives the Paradigm Change of Future Industrial Innovation. Journal of the Chinese Academy of Sciences, 40(05): 820–827.

[10] Zheng Y, Wang Y. (2025). How Generative Artificial Intelligence Empowers High Quality Development of Science Education. Science and Society, 15(01): 18–21.